

NWS FORM E-5

(11-88)

(PRES. by NWS Instruction 10-924)

U.S. DEPARTMENT OF COMMERCE

NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION

NATIONAL WEATHER SERVICE

HYDROLOGIC SERVICE AREA (HSA)

WFO Jackson, Mississippi

MONTHLY REPORT OF HYDROLOGIC CONDITIONS

REPORT FOR:

MONTH

YEAR

April

2013

TO: Hydrometeorological Information Center, W/OH2
NOAA / National Weather Service
1325 East West Highway, Room 7230
Silver Spring, MD 20910-3283

SIGNATURE

Alan E. Gerard, Meteorologist In-Charge

DATE

05/17/2013

When no flooding occurs, include miscellaneous river conditions, such as significant rises, record low stages, ice conditions, snow cover, droughts, and hydrologic products issued (NWS Instruction 10-924)



An X inside this box indicates that no river flooding occurred within this hydrologic service area.

Synopsis...

April was characterized by normal to below normal temperatures and a mixture of above and below normal rainfall across the Hydrologic Service Area (HSA). Rainfall was near normal to above normal southeast of the Natchez Trace, ranging from 95 to in excess of 200 percent of normal. Northwest of the Trace, rainfall ranged from approximately 85 to 150 percent of normal. At the Automated Observing Sites (ASOS) sites, rainfall ranged from 5.46 inches above normal at Hattiesburg, MS to 1.36 inches below normal at Greenville, MS. Cooler than normal temperatures extended into April. Mean monthly temperatures at ASOS sites ranged from 0.2 degrees below normal at Jackson and Meridian to 1.8 degrees below normal at Greenville.

The month opened with a cold front moving across the HSA producing widespread rainfall. On the 2nd, the front moved off into the Gulf and stalled. On the 3rd, a low pressure center formed along the old frontal boundary located in the Gulf of Mexico. The storm system moved eastward along the Louisiana and Mississippi Coastline. Rainfall spread across much of the HSA during the day on the 3rd and into the morning hours of the 4th. Rainfall totals from the 1st to the 4th ranged from 1.00 to 2.50 inches. High pressure moved into the region on the 4th.

High pressure remained over the region through the 7th; however, the high shifted eastward on the 8th which allowed southeasterly return flow from the Gulf of Mexico. A few isolated showers occurred mainly across central and western portions of the HSA on the 9th. By the afternoon of the 10th, a slow-moving cold front was approaching the HSA. During the late evening, a few strong to severe storms produced hail over Southeast Arkansas and Northeast Louisiana. From the morning and into the early afternoon of the 11th, a more potent round of severe storms developed. One of the storms produced a long track (68 miles) EF-3 tornado that moved across Kemper and Noxubee counties in northeast portions of the HSA, killing 1 and injuring 9 others. Other storms produced damaging winds in Forrest, Jasper, Clarke and Clay counties. Rainfall totals ranged from 1.00 to 3.00 inches across the area. High pressure moved into region on the 12th and 13th.

Late on the 13th, an approaching short wave trough prompted the formation of a low pressure center just off of the Southeast Texas Coast. The low pressure center moved along the Gulf Coast of Louisiana and Mississippi during the day on the 14th. Rainfall fell across all locations except northern portions of Northeast Louisiana, Southeast Arkansas, and our most northern HSA counties in Mississippi. Rainfall amounts ranged from less than 0.25 in the north to 3.50 inches in Southeast Mississippi.

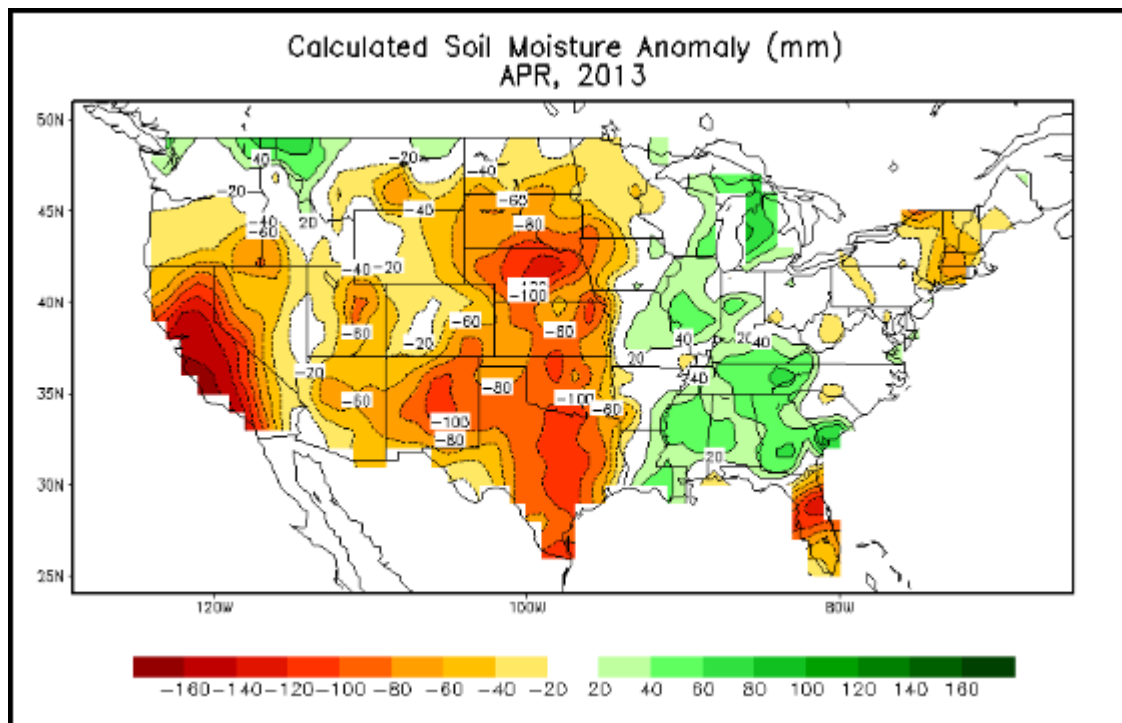
A southeasterly return flow from the Gulf of Mexico persisted from the 15th through the 17th bringing warm and humid conditions to the HSA. A cold front crossed the region on the 18th and into the early hours of the 19th bringing widespread rainfall. There were a series of weak tornadoes on the evening of the 18th in Ashley and Chicot counties in Southeast Arkansas, Madison and East Carroll parishes in Northeast Louisiana, and Issaquena, Washington, and Sharkey counties in West Mississippi. There were no injuries and only minimal damage. Rainfall totals ranged from 0.25 to 1.50 inches across southern portions of the HSA while 0.75 to 3.00 inches fell across northern portions of the HSA. High pressure remained in control of the weather through the 23rd.

Another cold front pushed across the HSA on the 24th bringing 0.50 to 2.50 inches of rainfall. The front stalled in the Gulf on the 25th. By the morning of the 26th, the stalled front began moving north across the HSA as a warm front. Only light showers were reported in the extreme northern HSA. On the 28th, another cold front moved rapidly across the area. Rainfall was scattered with amounts totaling less than 0.75 inches west of Interstate 55. Rainfall was more widespread east of Interstate 55 with amounts ranging from 0.50 to 3.00 inches. Weak high pressure then slid into the region as the cold front continued eastward.

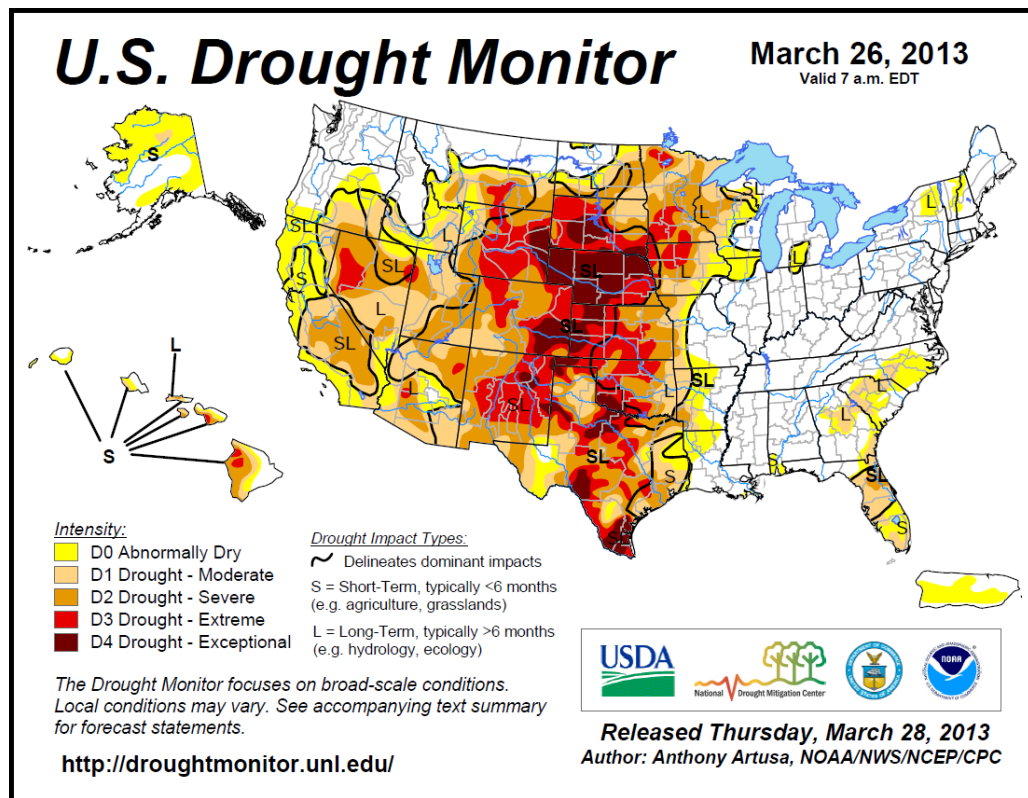
By the 30th, an upper level low pressure center began slowly moving from Southeast Texas towards the HSA. Well ahead of the low, rainfall developed across many areas south of Interstate 20 during the evening hours. The rainfall continued into the first couple of days of May. Rainfall totals before midnight on the 30th ranged from less than 0.25 to 1.50 inches.

River and Soil Conditions...

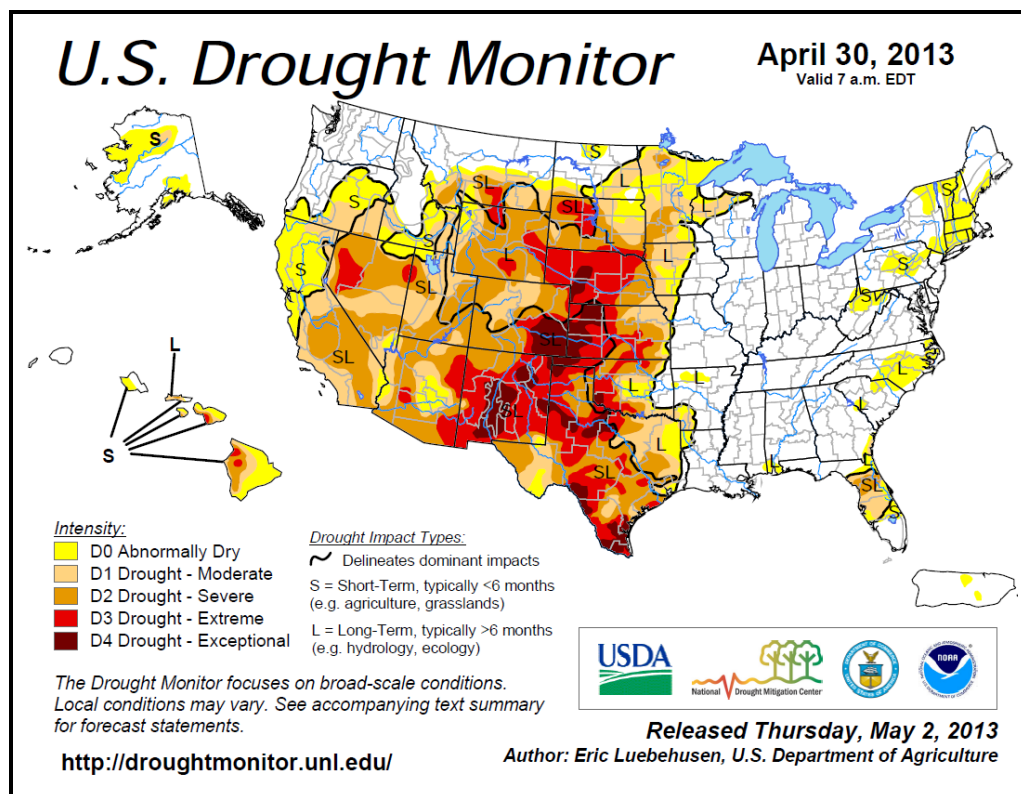
Soil Moisture Map:



Drought Comparison to prior month:



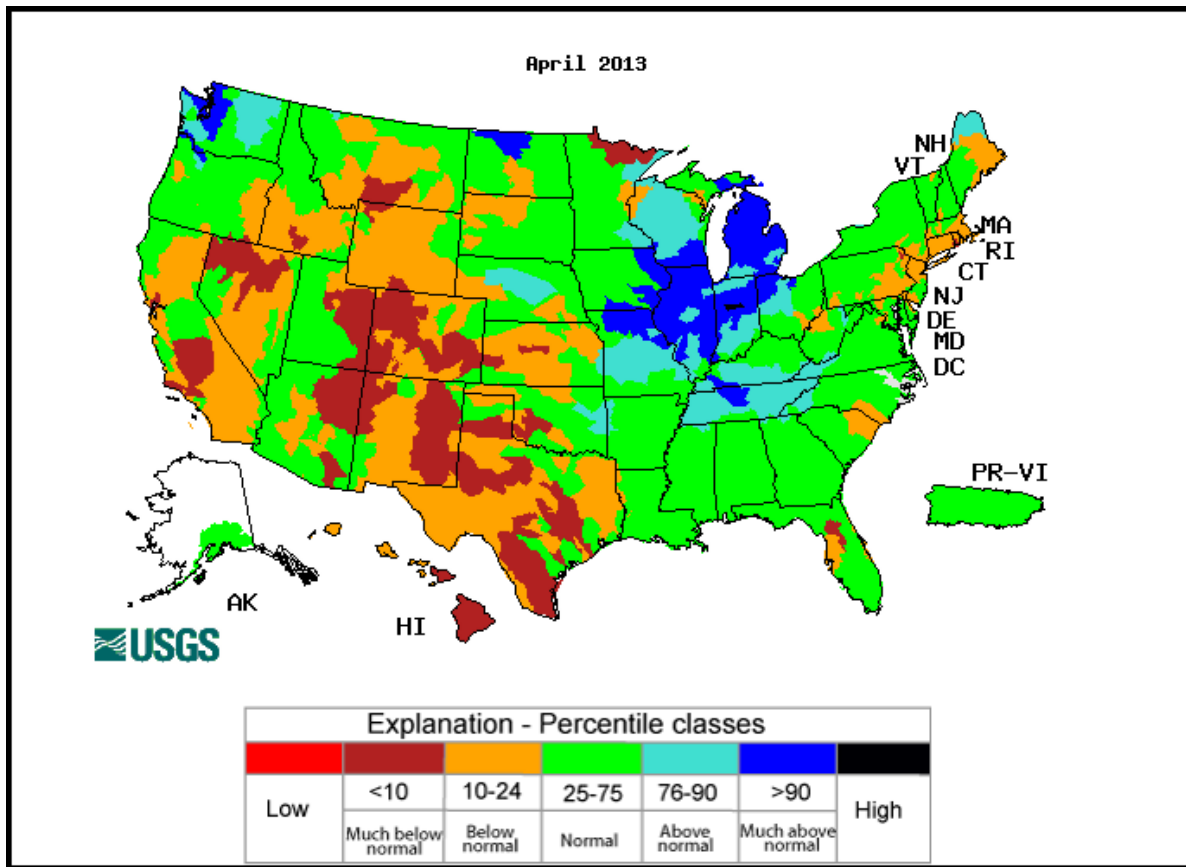
March 26, 2013



April 30, 2013

Streamflow:

The United States Geological Survey's (USGS) April 2013 river streamflow records were compared with all historical April streamflow records. Streamflow was normal across the Hydrologic Service Area (HSA)



April 2013 Streamflow

River Conditions and flood potential:

During the month, minor flooding occurred along the Upper Big Black River, Upper Pearl River, Yalobusha River, and the Big Sunflower. April had the least number of river forecast points going above flood in quite a while. With moist soils and rainfall scattered throughout the month, minor to moderate river rises occurred at most forecast locations.

The Mississippi river stages continued to fall during the first 10 to 12 days of the month. Heavy rainfall across the Upper Mississippi and Ohio River Valleys at the end of March and early April produced significant rises on the Middle Mississippi and Ohio Rivers. This rise arrived at the Lower Mississippi River at points from Arkansas City to Natchez between the 10th and 12th of the month. By the end of the month, river stages were only 2 to 5 feet below flood stage.

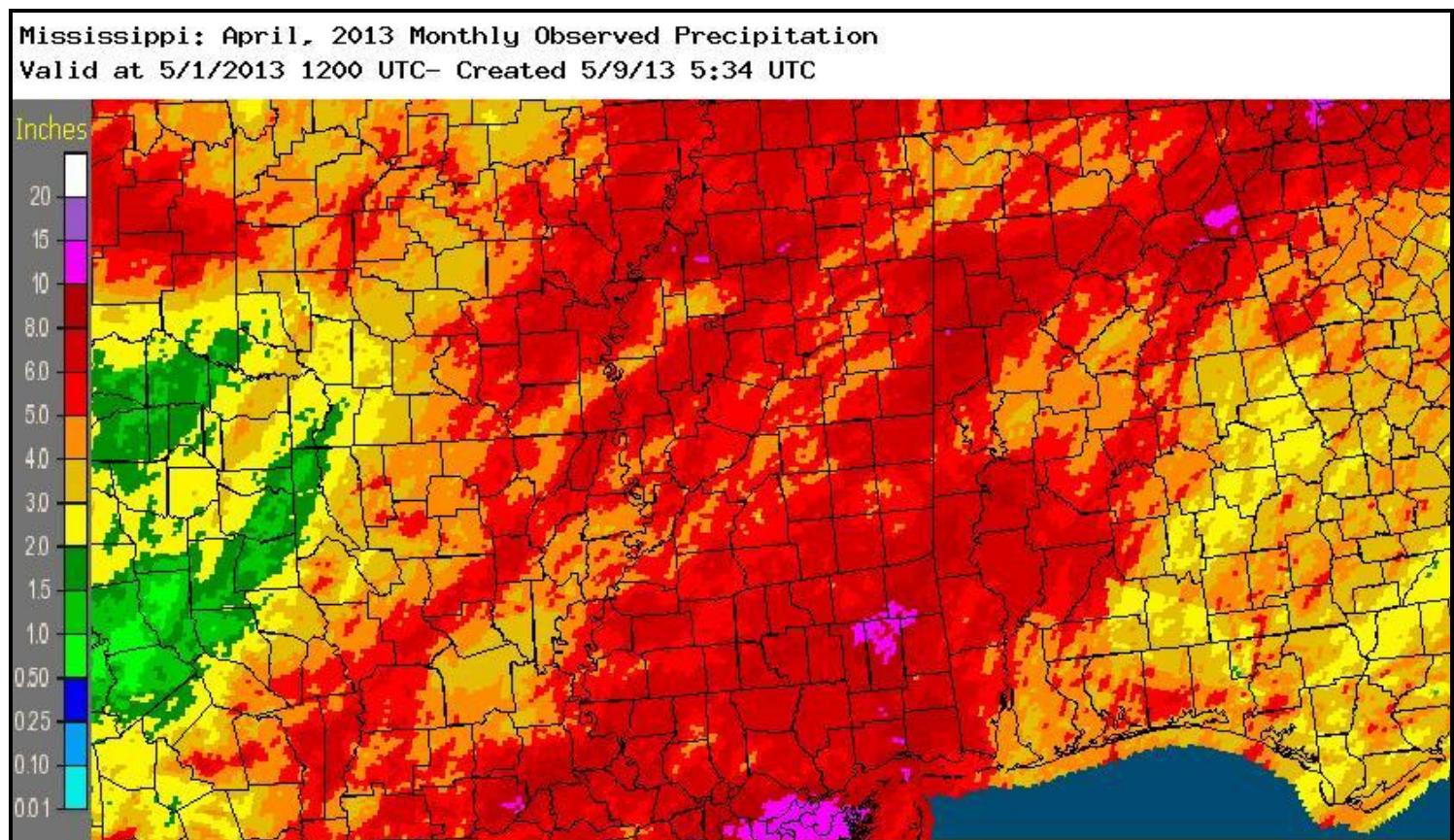
The climatic outlook for the next 3 months shows above normal temperatures and above normal rainfall across much of the HSA. The only exception was across northern portions of Northeast Louisiana, Southeast Arkansas, Northwest Mississippi, and the Mississippi River Valley where there are even chances for above or below normal rainfall.

Based on current soil moisture, streamflow, and the 3 month weather outlooks, flood potentials are as follows:

<i>Pearl River System:</i>	Above Average.
<i>Yazoo River System:</i>	Average.
<i>Big Black River System:</i>	Above Average.
<i>Homochitto River System:</i>	Average.
<i>Pascagoula River System:</i>	Average.
<i>Northeast LA and Southeast AR:</i>	Average.
<i>Tombigbee River System:</i>	Average.
<i>Mississippi River:</i>	Above Average.

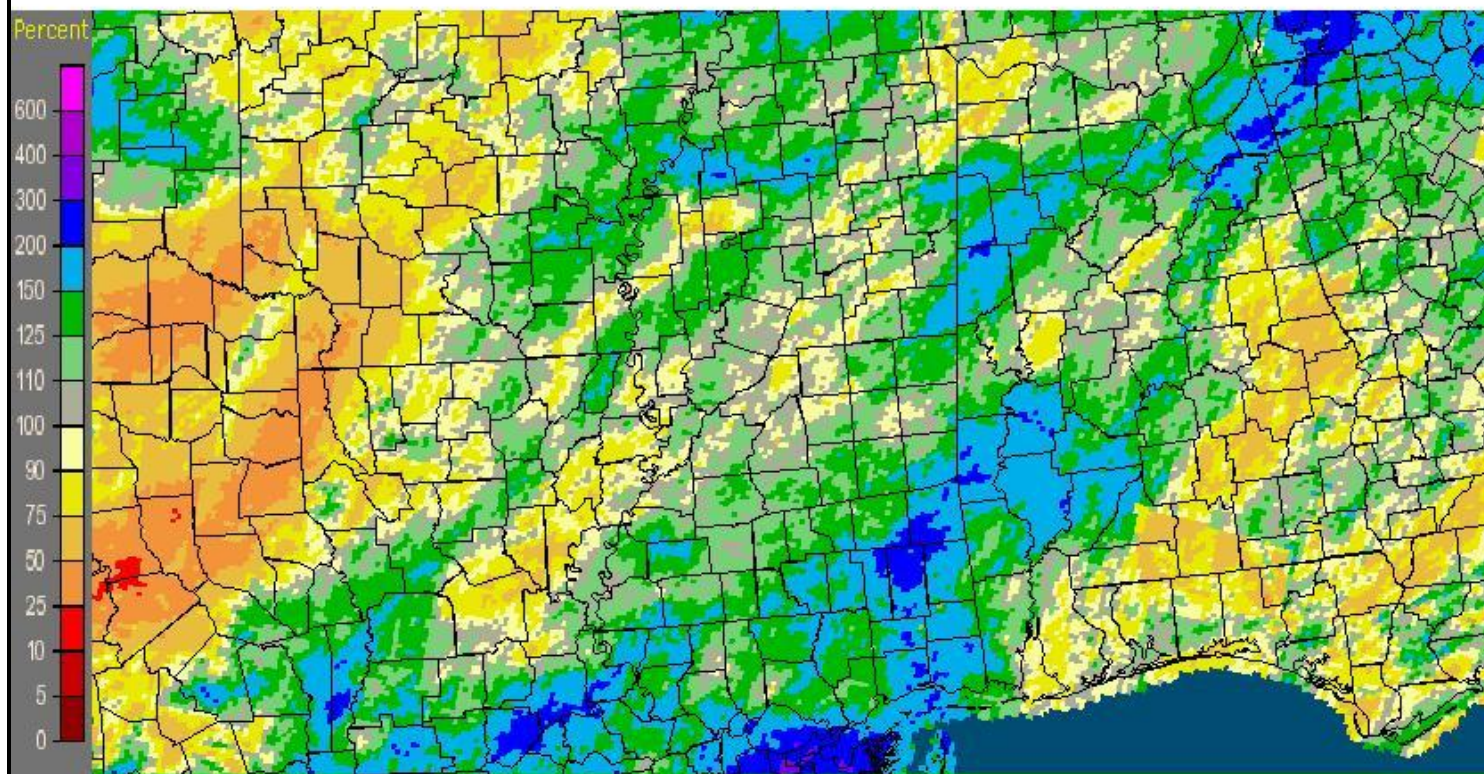
Rainfall for the month of April:

The largest rainfall amounts in the HSA from NWS Cooperative Observer reports during the period from 7 am on March 31st until 7 am on April 30th were: 11.59 inches at Hattiesburg, MS; 9.97 inches at Purvis, MS; 8.87 inches at Eudora, AR; 8.39 inches at Columbia, MS; 8.34 inches at Oak Ridge, LA; 8.16 inches at Pat Harrison Waterway's Turkey Creek Waterpark, MS; 8.04 inches at Grenada, MS; 7.73 inches at Moorhead, MS; 7.72 inches at Macon, MS; 7.51 inches at Belzoni, MS; 7.43 inches at Satartia, MS; 7.39 inches at Yazoo City, MS; 7.33 inches at Union Church, MS and Pat Harrison Waterway's Big Creek Water Park; 7.24 inches at Sumrall, MS; 7.14 inches at Philadelphia, MS; 7.10 inches at Kosciusko, MS; and 7.06 inches at Grenada Dam, MS.



April 2013 Rainfall Estimates

Mississippi: April, 2013 Monthly Percent of Normal Precipitation
Valid at 5/1/2013 1200 UTC- Created 5/9/13 5:45 UTC



April 2013 Percent of Normal Rainfall Estimates

Note: Observer rainfall and MPE may differ due to time differences.

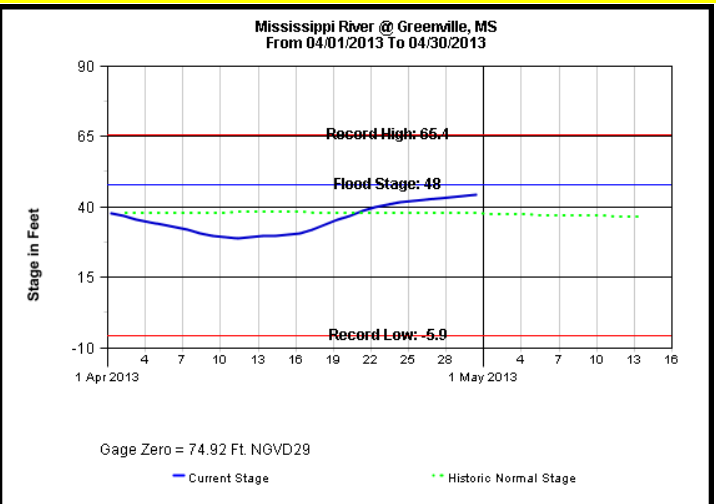
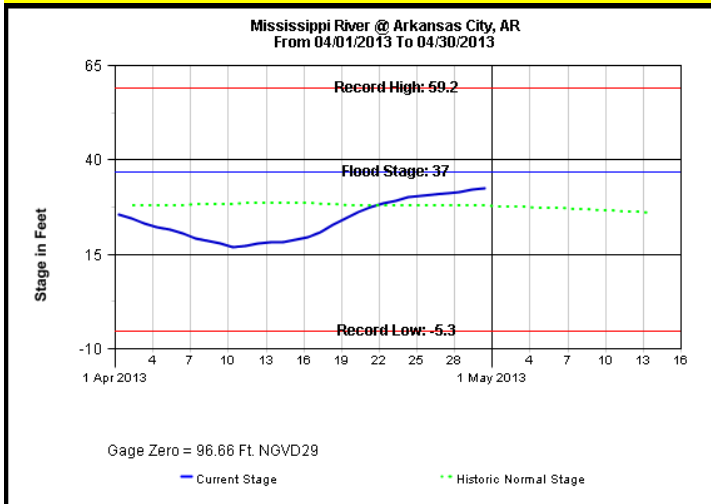
April rainfall for Selected Cities...

City (Airport)	April Rainfall	Departure from normal	2013 Rainfall	2013 Departure from Normal
Jackson, MS	4.74	-0.22	27.77	+8.04
Meridian, MS	5.22	+0.44	27.80	+6.87
Greenwood, MS	5.85	+0.72	24.13	+5.75
Greenville, MS	3.45	-1.36	20.66	+1.31
Hattiesburg, MS	10.39	+5.46	30.97	+9.41
Vicksburg, MS	4.45	-0.52	30.24	+9.90

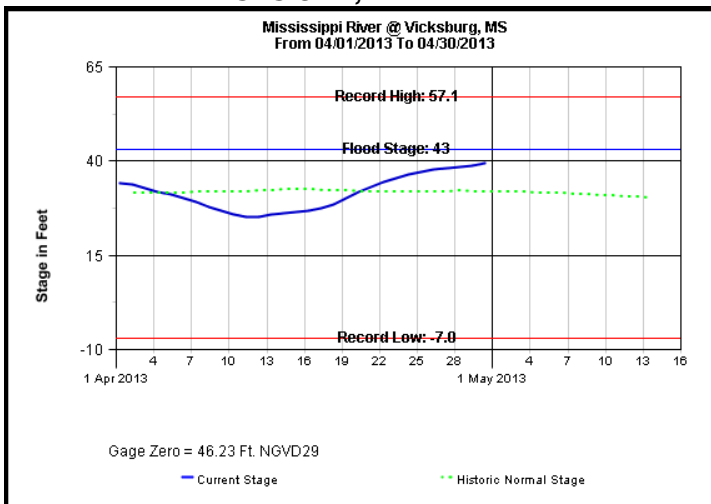
Mississippi River...

Mississippi River Plots for April, 2013

Plots Courtesy of the United States Army Corps of Engineers

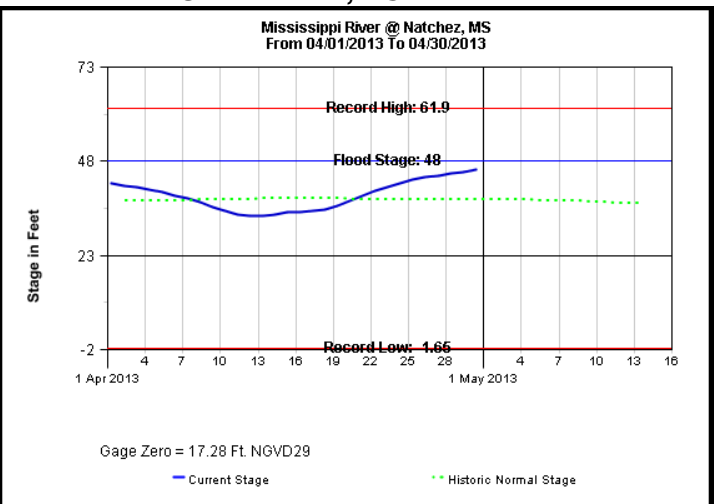


ARKANSAS CITY, AR



VICKSBURG, MS

GREENVILLE, MS



NATCHEZ, MS

Preliminary high and low stages for the month:

Location	FS	High Stage(ft)	Date	Low Stage(ft)	Date
Arkansas City, AR	37	32.70	04/30/13	16.87	04/10/13
Greenville, MS	48	44.64	04/30/13	28.54	04/12/13
Vicksburg, MS	43	39.61	04/30/13	25.15	04/11/13
Natchez, MS	48	45.99	04/30/13	33.39	04/12/13

Total Flood Warning products issued: 9
Total Flood Statement products issued: 85
Total Flood Advisories MS River : 16
Daily Climate and Ag WX Products (AGO'S) issued: 30
Daily CoCoRaHS Rainfall Products (LCO'S) issued: 30
Daily River and Lake Summary Products (RVD'S) issued: 30

Marty V. Pope
Service Hydrologist &
Latrice Maxie
Assistant Hydrologist/Observing Program Leader (OPL)

Note: Provisional stage and precipitation data were furnished with the cooperation of the Mississippi, Louisiana, and Arkansas National Weather Service Cooperative Observer Programs, United States Geological Survey (USGS), United States Army Corps of Engineers (USACE), Pearl River Valley Water Supply District (PRVWSD), Pat Harrison Waterway District, Pearl River Basin Development District, and the Mississippi Department of Environmental Quality.

cc: USGS Little Rock District
USGS Ruston District
USACE Mobile District
USACE Vicksburg District
USACE Mississippi Valley Division
USGS Mississippi District
SRH Climate, Weather and Water Division
Lower Mississippi River Forecast Center
Pearl River Valley Water Supply District
Hydrologic Information Center
Southern Region Climate Center
Pat Harrison Waterway District
Pearl River Basin Development District